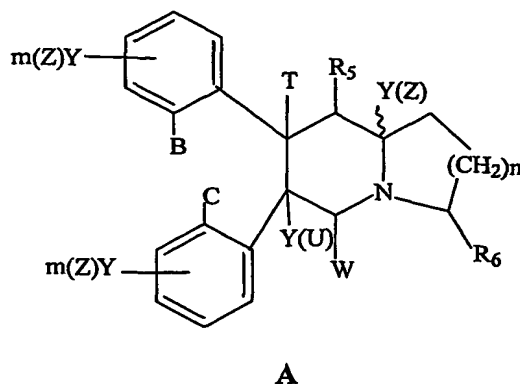


What is claimed is:

1. A compound of the formula:



Wherein Y is O, S, NH, CH<sub>2</sub> or is absent;

Each (Z) is independently H, a (C<sub>1</sub>-C<sub>4</sub>) alkyl, a substituted alkyl, an aryl, a substituted aryl, alkyl silyl, a heterocycle, a substituted heterocycle, with the proviso that not all Z are H when Y is absent;

(U) is H, a (C<sub>1</sub>-C<sub>4</sub>) alkyl, a substituted alkyl, an aryl, a substituted aryl, alkyl silyl, a heterocycle, a substituted heterocycle, or together with W forms a double bond in the nitrogen containing ring or together with T forms a double bond in the nitrogen containing ring;

T is H, forms a double bond with the carbon to which R<sub>5</sub> is attached or forms a double bond with the carbon attached to Y(U);

W is H or forms a double bond with the carbon attached to Y(U) in the nitrogen containing ring;

R<sub>5</sub> is H, OH, =O (to form a carbonyl group with the carbon to which it is attached), a carboxyl (carboxylate group), -OC(O)R<sub>x</sub> group, a -C(O)R<sub>x</sub>, or a -C(O)OR<sub>x</sub> group, where R<sub>x</sub> is a C<sub>2</sub> to C<sub>15</sub> alkyl, preferably a C<sub>2</sub> to C<sub>8</sub> alkyl;

$R_6$  is H, OH, =O (to form a carbonyl with the carbon to which it is attached), a carboxyl (carboxylate group), a  $-OC(O)R_x$  group, a  $-C(O)R_x$ , or a  $-C(O)OR_x$  group, where  $R_x$  is defined above;

B is Y(Z) or together with C forms a bond between the two phenyl rings to which each of B and C is attached;

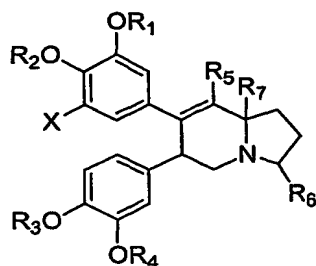
C is Y(Z) or together with B forms a bond between the two phenyl rings to which each of B and C is attached;

m is from 0 to 4;

n is from 0 to 3;

and epimers, pharmaceutically acceptable salts, solvates or polymorphs thereof.

2. A compound according to claim 1 of the formula:



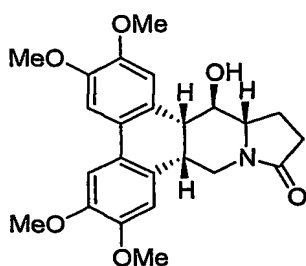
and the epimers, pharmaceutically acceptable salts, solvates, or polymorphs thereof, wherein  $R_1$ ,  $R_2$ ,  $R_3$ ,  $R_4$  and  $R_7$  are the same or different and are either H, an alkyl, a substituted alkyl, an aryl, a substituted aryl, a heterocycle, or a substituted heterocycle;

$R_5$  is H, OH, a  $-OC(O)R_x$  group, a  $-C(O)R_x$ , or a  $-C(O)OR_x$  group, where  $R_x$  is a  $C_2$  to  $C_{15}$  alkyl;

$R_6$  is H, a =O group, a carboxyl (carboxylate group), a  $-OC(O)R_x$  group, a  $-C(O)R_x$ , or a  $-C(O)OR_x$  group, where  $R_x$  is defined above;

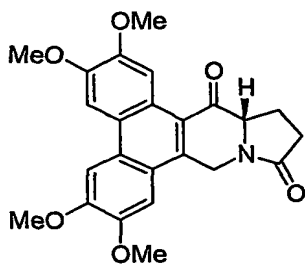
X is H or is OR, where R is either H, an alkyl, a substituted alkyl, an aryl, a substituted aryl, a heterocycle, or a substituted heterocycle.

3. A compound of claim 1, wherein the compound has the formula:



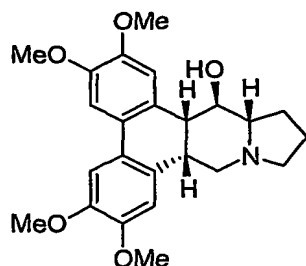
and the epimers, pharmaceutically acceptable salts, solvates, or polymorphs thereof.

4. A compound of claim 1, wherein the compound has the formula:



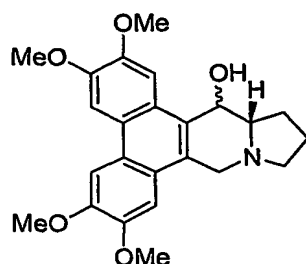
and its enantiomeric analogues, pharmaceutically acceptable salts, solvates, or polymorphs thereof.

5. A compound of claim 1, wherein the compound has the formula:



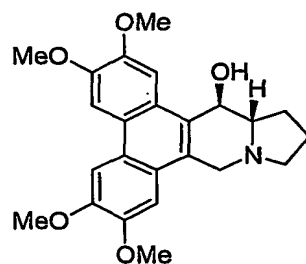
and its epimeric and enantiomeric analogues, pharmaceutically acceptable salts, solvates, or polymorphs thereof.

6. A compound of claim 1, wherein the compound has the formula:



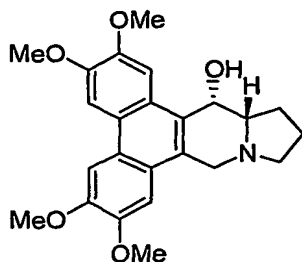
and its epimeric and enantiomeric analogues, pharmaceutically acceptable salts, solvates, or polymorphs thereof.

7. A compound of claim 1, wherein the compound has the formula:



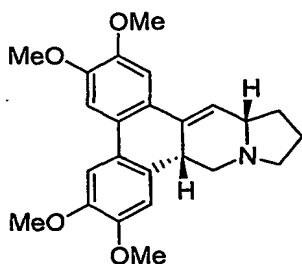
and its enantiomeric analogues, pharmaceutically acceptable salts, solvates, or polymorphs thereof.

8. A compound of claim 1, wherein the compound has the formula:



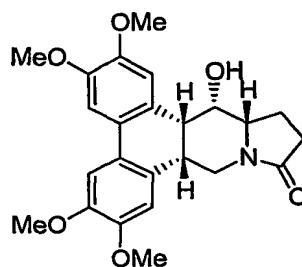
and its enantiomeric analogues, pharmaceutically acceptable salts, solvates, or polymorphs thereof.

9. A compound of claim 1, wherein the compound has the formula:



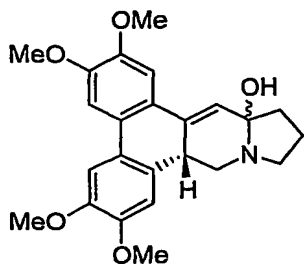
and its epimeric and enantiomeric analogues, pharmaceutically acceptable salts, solvates, or polymorphs thereof.

10. A compound of claim 1, wherein the compound has the formula:



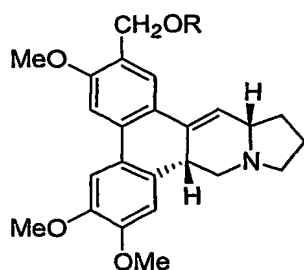
and its epimeric and enantiomeric analogues, pharmaceutically acceptable salts, solvates, or polymorphs thereof.

11. A compound of claim 1, wherein the compound has the formula:



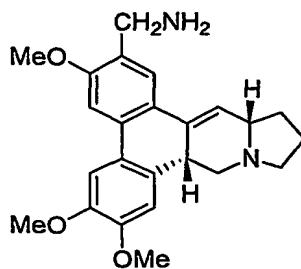
and its enantiomeric analogues, pharmaceutically acceptable salts, solvates, or polymorphs thereof.

12. A compound of the formula



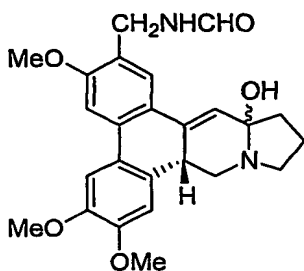
where R is either an alkyl, a substituted alkyl, an aryl, a substituted aryl, a heterocycle, or a substituted heterocycle, and its epimeric and enantiomeric analogues, pharmaceutically acceptable salts, solvates, or polymorphs thereof.

13. A compound of the formula:



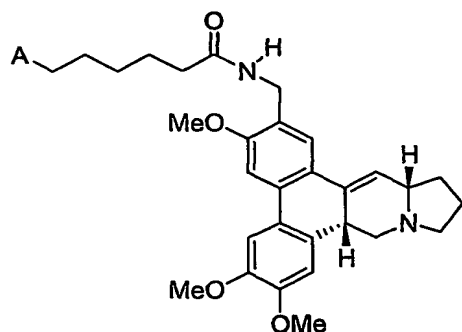
and its epimeric and enantiomeric analogues, pharmaceutically acceptable salts, solvates, or polymorphs thereof.

14. A compound of the formula



and its epimeric and enantiomeric analogues, pharmaceutically acceptable salts, solvates, or polymorphs thereof.

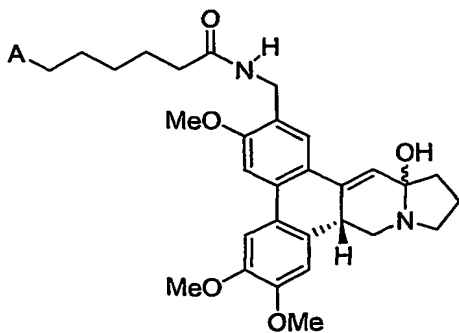
15. A compound of the formula



where A is activated CH-sepharose 4B,

and its epimeric and enantiomeric analogues, pharmaceutically acceptable salts, solvates, or polymorphs thereof.

16. A compound of the formula

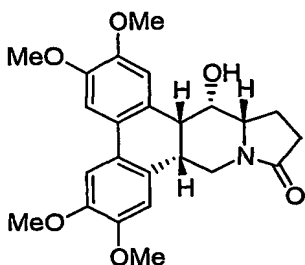


where X is activated CH-sepharose 4B,

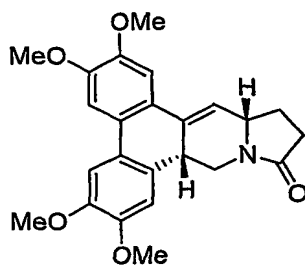
and its epimeric and enantiomeric analogues, pharmaceutically acceptable salts, solvates, or polymorphs thereof.

17. A process of making a tyloindicine analogue comprising:

(a) effecting a Martin sulfurane dehydration of an alcohol of the formula

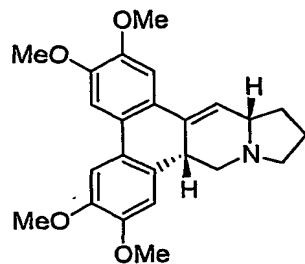


to yield an alkene of the formula



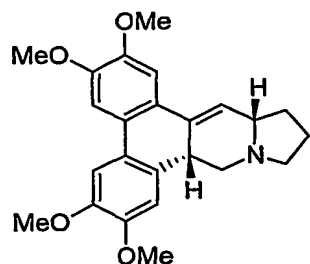
; and

(b) reducing the alkene of step (a) in a reducing reaction medium to yield a tyloindicine analogue of the formula

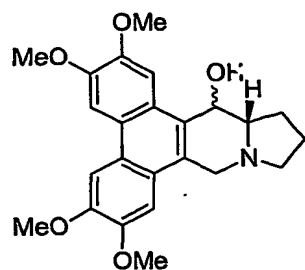


18. A process of making a tyloindicine analogue comprising  $\text{SeO}_2$  hydroxylation of an alkene of the formula:

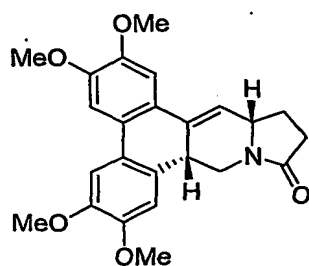




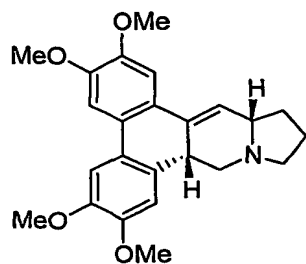
to yield a tyloindicine analogue of the formula:



19. A process of making a tyloindicine analogue comprising reducing an alkene of the formula

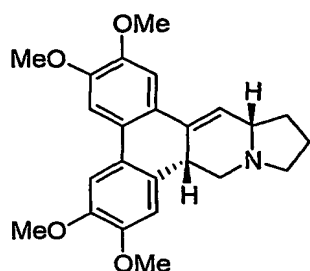


in a reducing reaction medium comprising  $\text{AlH}_3$  to yield a tyloindicine analogue of the formula

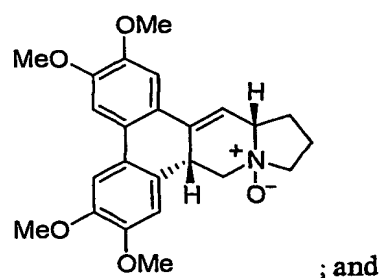


20. A process of making tyloindicine G or a tyloindicine G analogue comprising:

(a) effecting a Polonovsky oxidation of an alkene of the formula



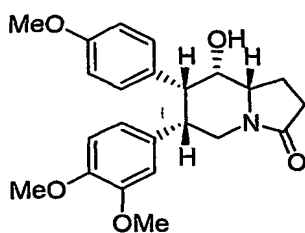
to yield a N-oxide of the formula



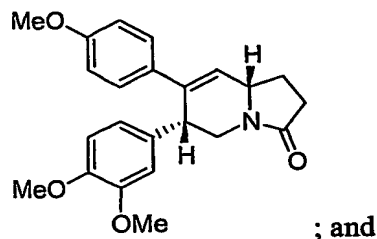
(b) trifluoroacetyling and deprotecting the N-oxide of step (a) in a reaction medium comprising  $K_2CO_3$ -MeOH to yield tyloindicine G or a tyloindicine G analogue.

21. A process of making a tyloindicine analogue comprising:

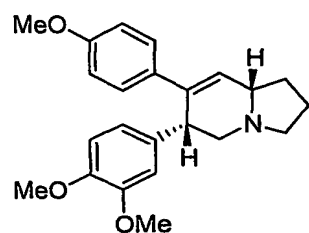
(a) effecting a Martin sulfurane dehydration of a compound of the formula



to yield an unsaturated intermediate of the formula

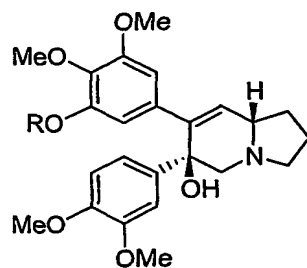


(b) reducing the intermediate of step (a) in a reducing reaction medium to yield a tyloindicine analogue of the formula

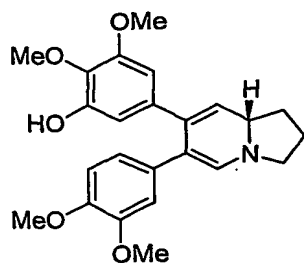


22. A process of making tyloindicine I comprising:

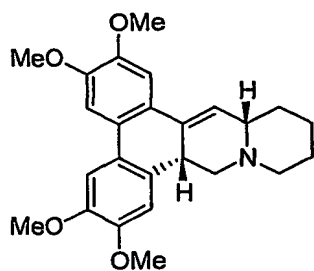
hydrogenolysis of a compound of the formula



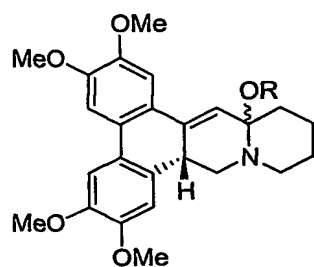
in a reaction medium comprising either  $H_2/Pd-C$  or  $Bu_4NF$  to yield a tyloindicine analogue of the formula



23. A process of making a tyloindicine analogue comprising  $SeO_2$  hydroxylation of an alkene of the formula



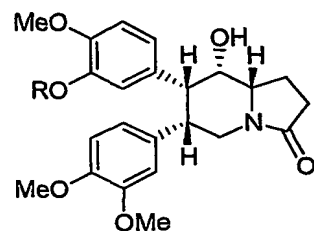
to yield a tyloindicine analogue of the formula



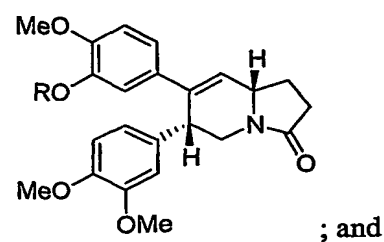
where R is H, Me<sub>3</sub>Si or is an aryl.

24. A process of making a tyloindicine analogue comprising:

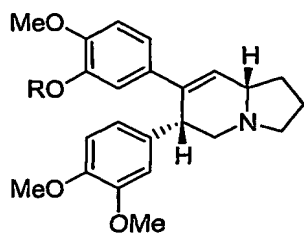
(a) Martin sulfurane dehydration of a compound of the formula



to yield an unsaturated intermediate of the formula

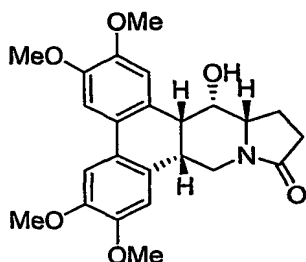


(b) reducing the unsaturated intermediate of step (a) in a reducing reaction medium to yield a tyloindicine analogue of the formula

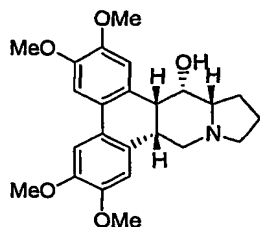


where R is H, Me<sub>3</sub>Si or is an aryl.

25. A process of making a tyloindicine analogue comprising reducing a compound of the formula



in a reducing reaction medium comprising LiAlH<sub>4</sub> to yield a tyloindicine analogue of the formula



26. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of claim 1 or 2.

27. A pharmaceutical composition, comprising a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of claims 3-15 or 55-58.

28. A method of treating a mammal suffering from a neoplasia, comprising administering to

the mammal in need thereof a therapeutically effective amount of one or more compounds of claims 1 or 2.

29. A method of treating a mammal suffering from a neoplasia, comprising administering to the mammal in need thereof a therapeutically effective amount of one or more compounds of claims 3-15 or 55-58.

30. A method of treating a mammal suffering from cancer, comprising administering to the mammal in need thereof a therapeutically effective amount of one or more compounds of claims 1 or 2.

31. A method of treating a mammal suffering from cancer, comprising administering to the mammal in need thereof a therapeutically effective amount of one or more compounds of claims 3-15 or 55-58.

32. The method of claim 30 or 31, wherein the cancer is one or more of the following types: stomach, colon, rectal, liver, pancreatic, lung, breast, cervix uteri, corpus uteri, ovary, prostate, testis, bladder, renal, brain or central nervous system, head and neck, throat, Hodgkins disease, non-Hodgkins leukemia, multiple myeloma leukemias, skin melanoma, acute lymphocytic leukemia, acute myelogenous leukemia, Ewings Sarcoma, small cell lung cancer, choriocarcinoma, rhabdomyosarcoma, Wilms Tumor, neuroblastoma, hairy cell leukemia, mouth/pharynx, oesophagus, larynx, melanoma, kidney and lymphoma.

33. The method of claim 30, wherein the cancer is a drug resistant cancer.

34. The method of claim 33 wherein said cancer is resistant to at least one drug selected from the group consisting of alkylating agents, DNA-interactive compounds and topoisomerase-active agents.

35. The method according to claim 33 wherein said cancer is resistant to at least one drug selected from the group consisting of etoposide, gemcitabine, hydroxyurea, Topo I drugs and Topo II drugs.

36. The method of claim 28, wherein a compound of claim 1 or 2 are administered to inhibit growth of a neoplasia.
37. The method of claim 29, wherein a compound of claims 3-15 or 55-58 are administered to inhibit growth of a neoplasia.
38. The method of claim 28, wherein the compound of claim 1 is coadministered with one or compounds selected from the group consisting of etoposide, cis-platin, carboplatin, lobaplatin, ormaplatin, oxaplatin, hexamethylmalamine, NLCQ-1, mephalan, dihydroxybusulfan, cyclophosphamide, daunorubicin, doxorubicin, mitomycin, adriamycin, camptothecin, vincristine, vinblastine, hydroxyurea, gemcitabine, Topo-I and Topo II drugs, polynucleotides, oligonucleotides, taxol, methacycline, anti-angiogenesis agents, azaindole derivatives, dibenzofluorene derivatives, temozolomide, AP/AMP and their prodrug forms.
39. The method of claim 28 or 29, wherein the neoplasia is a benign tumor.
40. The method according to 30 or 31, wherein the cancer is a malignant tumor.
41. The method of any of claims 30-32, wherein the cancer has developed drug resistance.
42. The method of any of claims 30-32, wherein the cancer is multiple drug resistant breast cancer.
43. The method of claim 28 or 29, wherein one or more compounds of claim 1 or 2 are administered to the mammal to inhibit the growth or spread of, or to shrink, a neoplasia.
44. The method of claim 28 or 29, wherein one or more compounds of claims 3-15 or 55-58 are administered to the mammal to inhibit the growth or spread of, or to shrink, a neoplasia.
45. The method of any of claims 28-44, wherein the mammal is a human.
46. A method of treating a mammal suffering from an inflammatory or autoimmune disorder, comprising administering to the mammal in need thereof a therapeutically effective amount

of one or more compounds of claim 1 or 2 or epimers, pharmaceutically acceptable salts, solvates, or polymorphs thereof.

47. A method of treating a mammal suffering from an inflammatory or autoimmune disorder, comprising administering to the mammal in need thereof a therapeutically effective amount of one or more compounds of claims 3-15 or 55-58 or epimers, pharmaceutically acceptable salts, solvates, or polymorphs thereof.

48. The method of claim 46 or 47, wherein the inflammatory or autoimmune disorder is associated with the activation of NF- $\kappa$ B.

49. The method of claim 46 or 47 wherein said inflammatory or autoimmune disorder is a transplantation rejection, transplantation-associated vasculopathy, acute glomerulonephritis, lupus nephritis and tubulointerstitial nephritis, asthma, respiratory distress syndrome, gastritis, rheumatoid arthritis, lupus erythematosus), vasculitis, diabetes, AIDS, sepsis, thrombosis, coronary artery disease, restenosis after angioplasty or by-pass surgery, ischemia).

50. The method of claim 46 or 47 wherein said inflammatory or autoimmune disorder is rheumatoid arthritis, inflammatory bowel disease, asthma, dermatitis, psoriasis and atopic dermatitis, autoimmune diseases, tissue and organ rejection, Alzheimers disease, Hodgkin's disease, AIDS and Ataxia Telangiectasia.

51. A method of treating an EBV infection comprising administering to a patient in need of therapy an effective amount of a compound according to any of claims 1 through 15 or 55-58 to said patient.

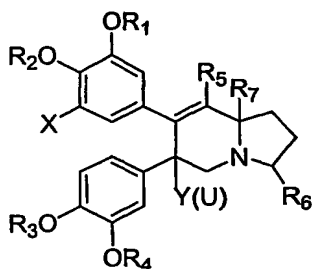
52. A method of treating EBV-related lymphoma or cancer in a patient comprising administering to a patient in need of therapy an effective amount of a compound according to any of claims 1 through 15 or 55-58 to said patient.



53. A method of preventing or reducing the likelihood that a patient will contract an EBV infection comprising administering to a patient at risk to contracting an EBV infection an effective amount of a compound according to any of claims 1 through 15 and 55-58 to said patient.

54. A method of preventing or reducing the likelihood that a patient will contract an EBV-related lymphoma or cancer in a patient comprising administering to a patient in need of treatment an effective amount of a compound according to any of claims 1 through 15 and 55-58 to said patient.

55. A compound of the formula:



and the epimers, pharmaceutically acceptable salts, solvates, or polymorphs thereof, wherein  $R_1$ ,  $R_2$ ,  $R_3$ ,  $R_4$  and  $R_7$  are the same or different and are either H, an alkyl, a substituted alkyl, an aryl, a substituted aryl, an alkyl silyl, a heterocycle, or a substituted heterocycle;

wherein Y is O, S, NH,  $CH_2$  or is absent;

U is H, a ( $C_1$ - $C_4$ ) alkyl, a substituted alkyl, an aryl, a substituted aryl, alkyl silyl, a heterocycle, a substituted heterocycle, or together with W forms a double bond in the nitrogen containing ring;

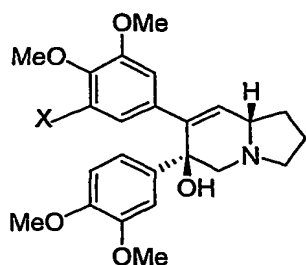
$R_5$  is H, OH, O (to form a carbonyl group with the carbon to which it is attached), a  $-OC(O)R_x$  group, a  $-C(O)R_x$ , or a  $-C(O)OR_x$  group, where  $R_x$  is a  $C_2$  to  $C_{15}$  alkyl, preferably a  $C_2$  to  $C_8$  alkyl;

$R_6$  is H, a carboxyl (carboxylate group), a  $-OC(O)R_x$  group, a  $-C(O)R_x$ , or a  $-C(O)OR_x$  group,

where  $R_x$  is defined above;

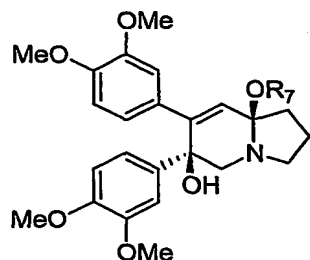
X is H or is  $OR_b$ , where  $R_b$  is either H, an alkyl, a substituted alkyl, an aryl, a substituted aryl, a heterocycle, or a substituted heterocycle.

56. A compound of claim 55, wherein the compound has the formula:

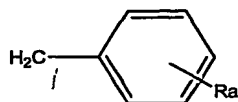


where X is H, OH,  $O(C_1-C_4)$  alkyl, O-benzyl, trialkylsilyl-O or diarylalkylsilyl-O and the epimers, pharmaceutically acceptable salts, solvates, or polymorphs thereof.

57. A compound of claim 55, wherein the compound has the formula:



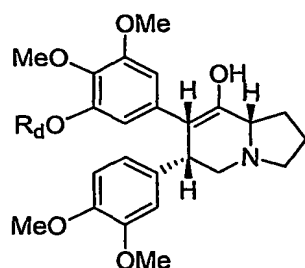
where  $R_7$  is H,  $SiMe_3$ , or is



where  $R_a$  is either H, an alkyl, a substituted alkyl, an aryl, a substituted aryl, a heterocycle, or a substituted heterocycle,

and the epimers, pharmaceutically acceptable salts, solvates, or polymorphs thereof.

58. A compound of claim 55, wherein the compound has the formula:



and the epimers, pharmaceutically acceptable salts, solvates, or polymorphs thereof, where  $R_d$  is H or a  $C_1$ - $C_4$  alkyl group.

59. Use of a compound according to any of claims 1-15 and 55-58 for the manufacture of a medicament for the treatment of neoplasia.

60. Use of a compound according to any of claims 1-15 and 55-58 for the manufacture of a medicament for the treatment of cancer.

61. Use of a compound according to any of claims 1-15 and 55-58 for the manufacture of a medicament for the treatment of an EBV infection in a patient.

62. Use of a compound according to any of claims 1-15 and 55-58 for the manufacture of a medicament for the treatment of an inflammatory or autoimmune disease.